

Letter to the Editors

Nasal septal perforation enlargement related to topical ocular steroids

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Nasal septal perforations are rare clinical entities, and most of them occur after nasal septal surgeries. Less commonly, nasal septal perforations can be caused by the use of topical intranasal steroids. To our best knowledge, this is the first reported case of enlargement of a pre-existing nasal septal perforation related to topical ocular steroid use.

A 61-year-old female was referred for bilateral progressive open angle glaucoma. Past medical history included severe left-sided facial trauma sustained during a push-bike accident 10 years previously. Injuries sustained included fractured upper incisors, loosening of the right canine tooth and a fractured nasal bridge. There were no facial bone fractures or documented ocular injuries. Corrective procedures on the nose were carried out 2 weeks after the accident. Septorhinoplasty was performed 2 years later. Postoperatively, a nasal septal perforation measuring 3×4 mm was found which caused whistling and crusting. Conservative management was suggested.

In 2003, an augmented trabeculectomy with mitomycin-c was performed in the right eye and postoperatively the patient was put on a reducing dose of 2-hourly topical prednisolone acetate 1%. Two months after the trabeculectomy, whilst still on $4 \times$ daily topical steroid and $2 \times$ daily topical chloramphenicol, she experienced a sudden improvement in her nasal symptoms with a visible enlargement of her septal perforation. Nasal examination revealed an extremely thin septum with a 6×8 -mm clean perforation. Further enquiry revealed that since the trabeculectomy, she had stopped performing punctal occlusion due to a fear of damaging her eyes. Punctal occlusion was recommenced. At the time of this report, there has been no further increase in perforation size and the intraocular pressure (IOP) is

maintained at 12 mmHg. The patient is pleased to be clear of her long-term nasal symptoms.

Nasal septal perforations occur rarely, and they are seen from time to time in ear, nose and throat clinics. Oberg *et al.* [1] estimated the prevalence to be less than 1% in the general adult population. The aetiology of nasal septal perforations can be traumatic, iatrogenic, inflammatory, malignant and cocaine related. Traumatic perforations may be caused by facial trauma or self-induced injuries such as nose picking. Iatrogenic causes include nasal surgery, nasal intubation, intranasal foreign bodies and rarely topical steroid use [2]. Inflammatory and infectious causes such as sarcoidosis, Wegener's granulomatosis, syphilis and tuberculosis have been reported. The frequency of nasal septal perforation seems to correlate with the frequency of nasal surgical procedures and intranasal cocaine use. Cervin and Andersson have reported an increasing number of nasal septal perforations, especially in recent years [2]. In their study, the most common risk factor was intranasal steroid use. Contact allergy to steroids has been suggested as a possible mechanism for steroid-induced septal perforations, but the exact aetiology is unknown [3].

Patients with nasal septal perforations can have a spectrum of symptoms ranging from completely asymptomatic to totally debilitating. The symptoms usually correlate to the size and the site of the perforation. Patients can experience whistle with inspiration, crusting, epistaxis, discharge, parosmia and neuralgia. The management of nasal septal perforations may include septal prosthesis to cover the defect or surgical closure using a wide variety of techniques. Many perforations are simply left alone.

This reported case illustrates the potential for an unusual extraocular side-effect of topical ocular steroids. It also highlights the importance of correct drop instillation technique including punctal occlusion. The use of punctal occlusion may minimize the amount of steroid reaching the nasal mucosa. Interestingly, the

patient in this case actually experienced symptomatic relief with an enlarged opening, and was pleased with the outcome. Patients with a pre-existing nasal septal perforation should be warned of the potential for change if commenced on topical ocular steroids and instructed in the importance of punctal occlusion.

Competing interests: None declared.

References

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Received

23 May 2005

Accepted

6 June 2005

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